



PATENT SPECIFICATION

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PROVISIONAL SPECIFICATION.

Improvements in and connected with Oil Cans and the like.

I, WILLIAM WEBSTER WATTS, of Luard Lodge, Cambridge, a British subject, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to improvements in and connected with oil-cans and the like and has for its object to provide means for delivering oil in an improved manner, the said oil-can being of the type
10 comprising a cylinder or reservoir, a delivery nozzle or spout and a pump attachment.

According to this invention, the oil-can is fitted with a delivery nozzle or spout
15 device comprising a pump attachment adapted to readily and automatically shut off the delivery of the oil when the pump is not in use, the pump piston or plunger being operated by a hollow or tubular pin
20 device or plunger rod projecting through the nozzle or spout and reciprocated by alternate pressure and relaxation of pressure of the person's hand holding the oil-can. For example, the oil-can is conveniently provided with a cylinder in
25 which a plunger or piston is adapted to reciprocate, the said cylinder being furnished with a port or ports adapted to be opened and closed by the said plunger or
30 by a valve in the said cylinder for the admission of oil from the oil-reservoir to the cylinder, a spring adapted to force the piston or plunger towards one end of the cylinder, a hollow pin, piston rod, or
35 plunger rod fixed to the plunger and projecting through the spout and means for transferring the oil from the cylinder to the hollow pin or plunger rod pressing on the oil-can.

40 In carrying the invention into effect, one suitable construction comprises a cylindrical oil-can, container or reservoir, provided at one end with a small cylinder having an opening at its inner end which
45 is made, internally, in the form of a valve seat for a valve adapted to open to admit

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oil to the cylinder on the suction stroke of the plunger and to close on the opposite stroke of the plunger in the cylinder. The plunger is hollow and similarly provided
50 with a valve-seat for the valve, which may be a ball-valve, normally held closed by a coiled spring, seated in the hollow plunger. The interior of the hollow
55 plunger is in open communication with the tubular-pin or plunger-rod and the latter is, conveniently, screwed or sweated into an externally screw-threaded plug adapted to be screwed into the
60 hollow plunger, the plug thus forming an abutment for the coiled spring which normally holds the ball-valve against its seating in the inner end of the plunger. A coiled spring normally maintains the
65 plunger at the outer end of its stroke, the tubular-pin or plunger-rod being then projected to a suitable extent.

In order to supply oil or other liquid to the required place, the oil-can is pressed with the tubular-pin inserted in the
70 lubricator or at the desired place elsewhere.

Normally, the cylinder is full of oil, so that the inward pressing of the plunger has the effect of closing the inlet valve in
75 the end of the cylinder and opening the valve in the hollow plunger. The oil contained in the cylinder is thus forced past the valve in the plunger and through the hollow pin, whence it is delivered to
80 the required place. On now relaxing the pressure of the hand, the valve in the plunger closes automatically and the plunger is again forced outwardly by the spring, the inlet valve opens and a fresh
85 supply of oil flows into the cylinder ready for the next discharge.

It will be seen, therefore, that only a definite or limited quantity of oil can be delivered at each operation and that after
90 each operation a secure shutting off of the oil is effected. The device is particularly

suitable for the delivery of thick lubricating oils, such as used by motorists, but it may be used equally well for the delivery of less viscous oils.

5 The oil-can may be in the form of a relatively long cylindrical container, the length of which makes it very advantageous for use where parts to be lubricated are difficult or inconvenient of
10 access.

The oil-can may be fitted with a safety-cap for enclosing the spout or nozzle, and the pin projecting beyond the latter, prevents the pin from being
15 pressed back accidentally, prevents the pin from escaping and protects the pin from damage. The safety-cap can be fitted inside upon its closed end with a suitable pin which pin will enter
20 the tubular oil nozzle and render it free from dirt or obstruction. In the case of a pocket oil-can constructed according to

this invention, it is very desirable that a safety cap and an internal pin should be fitted in order to prevent the escape of oil into the pocket and to keep the tube
25 always clear and open.

With oil-cans of the hereinbefore described construction, it is possible to secure forcible delivery in any direction
30 and even to perform oiling in an upward direction, for, if the plunger be pressed back whilst holding the can directed upwardly against the part to receive the oil, a charge of oil will be forcibly
35 delivered to such parts by merely pressing the tubular pin or plunger rod against the elevated part to be oiled.

Dated this 30th day of December, 1922.

ALLISON BROS.,
Chartered Patent Agents,
84—86, Chancery Lane, London, W.C.,
Agents for the Applicant.

COMPLETE SPECIFICATION.

Improvements in and connected with Oil-cans and the like.

I, WILLIAM WEBSTER WATTS, of Luard Lodge, Cambridge, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the
45 following statement:—

This invention relates to an oil-can or oiler of the type comprising an oil-container, a pump and a piston-rod or tubular pin, around or through which the oil is discharged. In one such oil-can,
50 the cylinder was provided with a spring-pressed plunger therein furnished with a tubular pin or piston-rod passing out through a perforated cap at the end of the oil-can. The tubular pin or piston-rod had a discharge port in its side and the piston was capable of a limited sliding motion relatively to the tubular pin, the said cylinder being provided with a
55 suction valve for the admission of oil from the container to the cylinder, so that on applying pressure to the tubular pin, the port therein was uncovered and oil was admitted to the tubular pin from the cylinder and on a continuance of such
60 pressure, the suction valve was closed and the continued movement of the piston-rod caused oil to be forcibly discharged through the tubular pin. It has, moreover, also been proposed to provide similar oil-cans with caps to enclose the end of the oil-can from which the oil was discharged in order to prevent leakage of the oil when the oil-can was not in
75 use.

According to this invention the tubular pin or piston-rod of the oil-can is immovably connected to the piston, the piston is hollow and furnished with a valve, normally closed by a spring to positively prevent undesirable escape of oil except during the intentional discharge thereof.
85 In order to prevent soiling clothes or other objects owing to any surplus oil remaining in or on the tubular pin, to prevent the said pin from being pressed back accidentally and to protect it from damage, the oil-can is, conveniently, furnished with a safety cap to enclose the tubular pin and the spout or nozzle and such cap is furnished with a pin adapted to enter and fit in the bore of the tubular pin.
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The construction shown on the accompanying drawing comprises a cylindrical oil-container or reservoir *a*, closed at one end and provided, at the other end, with a cylinder *b* having an externally tapered spout or nozzle *c*, which is, conveniently, provided with a screw-threaded portion *c'*, adapted to be screwed or fixed into the delivery-end of the cylinder *b*.
95

The cylinder *a* has a plug *d* with an opening, at its inner or upper end, which is made, internally, in the form of a valve-seat for a valve *e*, adapted to open to admit oil from the oil container *a* to the cylinder *b* on the outer or suction stroke of the plunger, due to the action of the spring *f* when forcing the plunger or piston *g* down to its normal position, as shown,
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and the valve *e* is adapted to close during the opposite stroke of the plunger *g* in the cylinder. The plunger *g* is hollow and is provided with a screw-threaded perforated cap *g*¹ serving as a valve-seat for a valve, which may be a ball-valve *h*, normally held closed by a coiled spring *i*, seated in the tubular portion or chamber *g*² of the hollow plunger. The chamber *g*³ in the interior of the hollow plunger is in open communication with the tubular pin or plunger-rod *k* and the latter is, conveniently, screwed or sweated into the hollow piston *g* and communicates with the valve-chamber *g*², the lower end of the chamber thus forming an abutment for the coiled spring *i* which normally holds the ball-valve *h* against its seating in the cap *g*¹ on the inner end of the plunger. The coiled spring *f*, normally maintains the plunger *g* at the outer end of its stroke, the tubular pin or plunger-rod *k* being then projected to a suitable extent.

In order to supply oil or other liquid to the required place, the oil-can is pressed with the plunger-pin *k* inserted in the oil-cup or lubricator or at the desired place elsewhere.

Normally, the cylinder *b* is full of oil, so that the act of pressing the plunger *g* inwardly has the effect of closing the inlet-valve *e* in the end of the cylinder and of opening the valve *h* in the hollow plunger. The oil contained in the cylinder *b* is thus forced past the valve *h* and through the hollow pin *k* whence it is delivered to the required place. On now relaxing the pressure of the hand, the valve *h* in the plunger closes automatically and the plunger *g* is again forced outwardly by the spring *f*, the inlet valve *e* opens and a fresh supply of oil flows into the cylinder *b* ready for the next discharge.

The oil-can may be in the form of a relatively long cylindrical container *a*, which for filling purposes is inverted and the cylinder *b* with the nozzle or spout *c* thereon, is removed. After filling, the cylinder is replaced and the oil-can is ready for use but, obviously, if desired, the container may be provided with a cap or plug at the top for filling purposes. Such a cap or plug or the upper end of the container itself may, in known manner have a wide flange to serve as a foot or base for the oil-can.

The oil-can is conveniently fitted with a safety-cap, such as *l* for enclosing the spout or nozzle *c*, and the tubular pin *k*, projecting beyond the latter. This prevents the pin *k* from being pressed back

accidentally, prevents oil from escaping and protects the pin from damage. The safety-cap may be provided with a loop, or, as shown with a hook *m* by which it may be hung up and it is fitted inside upon its closed end with a pin *n*, which pin will enter the tubular pin *b* and render it free from dirt or obstruction. In the case of a pocket oil-can of this kind, it is, in some cases, desirable that a safety-cap and an internal pin should be fitted in order to prevent the escape of oil into the pocket and to keep the tube always clear and open.

The delivery of oil, whether upward or downward, is secured by merely pressing the tubular pin or plunger rod against the elevated or other part to be oiled, the discharge being coincident with the application of pressure. Only a definite or limited quantity of oil can be delivered at each operation, and a secure shutting-off of the oil is secured. The device is particularly suitable for the delivery of thick lubricating oils, such as are used by motorists: but it may be used equally well for the delivery of less viscous oils.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An oil-can comprising an oil container, a delivery nozzle or spout, a cylinder, a spring-pressed piston, a tubular pin or piston-rod projecting through the said nozzle, a valve or the like for admitting oil from the container to the cylinder and a valvular device for delivering oil from the cylinder to the tubular pin or piston-rod on applying pressure to the latter, in which the tubular pin or piston-rod is immovably connected to the piston, the piston is hollow, to form a valve-chamber, is furnished with a valve seat and contains a spring-pressed valve, substantially as described.

2. An oil-can, as claimed in Claim 1, provided with a safety cap to enclose the tubular pin or piston-rod and nozzle when the oil-can is not in use, the said cap being provided with a pin adapted to enter and fit in the bore of the tubular pin.

3. The construction of oil-can as shown in the drawing.

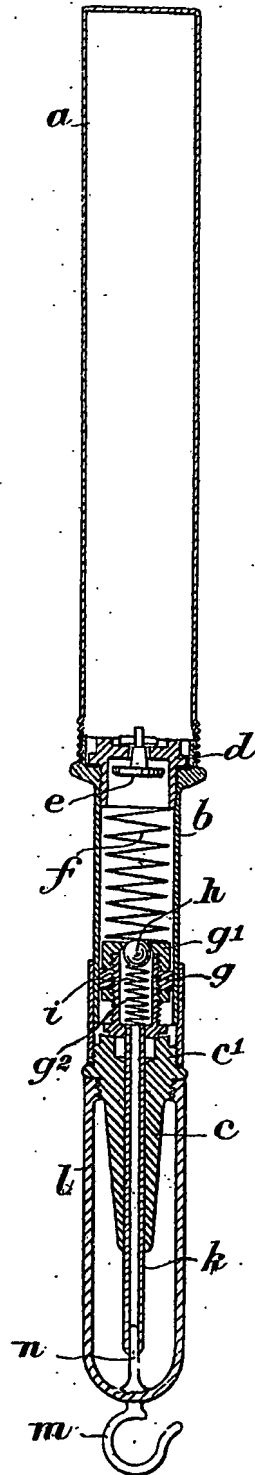
Dated this 27th day of July, 1923.

ALLISON BROS.,
Chartered Patent Agents,
84—86, Chancery Lane, London, W.C.,
Agents for the Applicant.

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1 SHEET

[This Drawing is a reproduction of the Original on a reduced scale]



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